Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/086,849	DAGTAS ET AL.
	Examiner	Art Unit	
	Donald L. Storm	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE __3__ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *March 1, 2002 through August 13, 2003*.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-28_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-28_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *18 April 2002* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All   b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/1/02 & 8/13/03*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

1.   A copy of the International Search Report (Form PCT/ISA/21, Form PCT/ISA/220)

(received August 13, 2003) is present. The search report and its cited documents have been

considered by the Examiner.

Drawings

2.   The proposed substitute drawings (received April 18, 2002) are present and are now the

Figs. 1-4(a,b) of record. These drawing sheets are substantively acceptable to the Examiner.

Specification

3.   The title is objected to because it is not sufficiently descriptive of the invention. A new

title is required that is clearly indicative of the invention to which the claims are directed. See

MPEP § 606.01. The Examiner suggests that the Applicant consider a title including these

elements: "Audio Recorder-Player and Method Operating Automatic Selection."

Claim Informalities

4.   The Examiner notes, without objection, the possibility of informalities in the claims,

namely in claim 23, line 2, if the singular noun "one" is intended to be the subject of the plural

verb "are", it does not agree in number. The Applicant may wish to consider changes during

normal review and revision of the disclosure.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Hoffberg

6.   Claims 1, 3, 5-8, 10-17, 19-23, and 25-28 are rejected under 35 U.S.C. 102(b) as being

anticipated by Hoffberg et al. [US Patent 5,774,357].

7.   Regarding claim 10, Hoffberg [at Fig. 20] describes an audio recorder-player by

describing the content and functionality of the recited limitations recognizable as a whole to one

versed in the art as the following terminology:

N number of sources greater than 1 that transmit N signals generated by M number of

tuners greater than 1 [see Fig. 25, items 2501, 2502, 2503, and their descriptions, especially at

column 66, lines 50-53, of a plurality of broadcasts providing received video signals by a

plurality of tuners];

an analyzer that extracts R number of signal characteristics from the signals [see Fig. 25,

items 2501, 2502, 2503, 2504, and their descriptions, especially at column 68, lines 24-28, of the

computer control recognition and characterization processes that form an extracted feature

storage matrix];

a memory that stores the signal characteristics [see Fig. 25, items 2503, and their

description especially at column 68, lines 23-28, of storing the extracted feature storage matrix of

the recognition and characterization processes];

output circuitry that reproduces a signal corresponding to one of the signals responsive to selection of at least one of the signal characteristics [see Fig. 25, items 2503, 2504, 2507, 2508, and their descriptions, especially at column 67, lines 58-67, of the preference and event correlator selecting a broadcast when the correlation to its reference profile is high and transferring the information in intermediate storage to the permanent storage device];

the sources, signals, signal characteristics, broadcast signal, and information in intermediate storage are audio [at column 42, lines 65-67, as the input in the video input includes the audio].

8.   Regarding claim 11, Hoffberg also describes:

a hard disk as the memory [see Fig. 25, items 2503, and their descriptions, especially at column 45, lines 58-60, of a hard disk drive for storing before transfer to permanent storage].

9.   Regarding claim 12, Hoffberg also describes:

each of the tuners is software instantiated by a processor [see Fig. 25, items 2502, 2504, and their descriptions, especially at column 68, line 29-column 69, line 56, and column 66, lines 50-52 of software running on processors that allow the basic functions of the interface control of tuners].

10.   Regarding claim 13, Hoffberg also describes:

a voice recognition routine instantiated by the processor as the analyzer [see Fig. 25, items 2504, 2505, and their descriptions, especially at column 68, line 29-column 69, line 1, of software running on processors serving voice recognition of the interface].

11.   Regarding claim 14, <u>Hoffberg</u> also describes:

voice recognition generating signals that control the output circuitry in response to a

spoken command [see Fig. 25, items 2504, 2505, and their descriptions, especially at column 38,

lines 30-44, of voice recognition activation/instructions providing suitable input for controllers].

12.   Claim 21 sets forth a process with limitations associated with using the system recited in

claim 10. Because <u>Hoffberg</u> describes the similar limitations as indicated there, this claim thus

is anticipated accordingly.

13.   Regarding claim 22, <u>Hoffberg</u> also describes:

N=M [at column 66, lines 51-53, as broadcasts that are received simultaneously by

tuners].

14.   Regarding claim 23, <u>Hoffberg</u> also describes:

one of the segments is temporarily stored [see Fig. 25, items 2501, 2502, 2503, and their

descriptions, especially at column 67, line 67-column 68, line 13, of recording a buffer segment

of the broadcast in temporary storage];

the storage each time a tuner is tuned to receive one of the sources [see Fig. 25, items

2501, 2502, 2503, and their descriptions especially at column 66, lines 51-56, as the tuner

receiving \broadcasts and the intermediate storage recording them simultaneously];

the characteristics are extracted from the temporarily stored segments [see Fig. 25, items

2503, 2504, and their descriptions especially at column 68, lines 1-19, of ex post facto

determination by using a delay of the determination].

15.   Regarding claim 25, Hoffberg also describes:

a selected characteristic corresponds to words [at column 48, lines 42-46, as the broadcast

program my be classified by words];

the words are extracted from speech in the segments [see Fig. 25, items 2504, 2505, and

their descriptions, especially at column 68, line 29-column 69, line 1, of software running on

processors serving voice recognition of the interface].

16.   Regarding claim 26, Hoffberg also describes:

generating a control signal for causing the output circuitry to reproduce the selected

signal responsive to a user selected one of the characteristics [at column 67, line 42-67 , as the

preference and event correlator selecting a broadcast when the correlation to a reference profile

that is distinguished from those undesired and undesirable broadcasts as requested by a user is

high and transferring the information in intermediate storage to the permanent storage device].

17.   Regarding claim 27, Hoffberg also describes:

generating a control signal for causing the output circuitry switch between output of one

of the signals and a monitored one of the signals when a signal sample indicative of occurrence

of an even of interest to a user [at column 67, line 42-67 , as the preference and event correlator

selecting a broadcast when the correlation to a reference profile that is distinguished from those

undesired and undesirable broadcasts as requested by a user is high and transferring the

information in intermediate storage to the permanent storage device].

18.   Claim 15 sets forth limitations similar to limitations set forth in claim 21. Hoffberg

describes the limitations as indicated there. Hoffberg also describes additional limitations as

follows:

storing the audio signals [at column 66, lines 52-66, as the received broadcasts are stored

in intermediate storage].

19.   Claim 16 sets forth additional limitations similar to limitations set forth in claim 22.

Hoffberg describes the additional limitations as indicated there.

20.   Claim 17 sets forth additional limitations similar to limitations set forth in claim 23.

Hoffberg describes the additional limitations as indicated there.

21.   Claim 19 sets forth additional limitations similar to limitations set forth in claim 25.

Hoffberg describes the additional limitations as indicated there.

22.   Claim 20 sets forth additional limitations similar to limitations set forth in claim 26.

Hoffberg describes the additional limitations as indicated there.

23.   Claim 1 sets forth limitations similar to limitations set forth in claim 10, where the tuners,

analyzer, memory, and circuitry provides the means and the plurality of the M, the N, and the R

describes at least two. Hoffberg describes the limitations as indicated there. Hoffberg also

describes additional limitations as follows:

storing the audio signals [at column 66, lines 52-66, as the received broadcasts are stored

in intermediate storage].

24.   Regarding claim 3, Hoffberg also describes:

including it in a computer [at column 68, lines 29-32, as incorporate elements on cards in

the Macintosh ci or other computer type].

25.   Claim 5 sets forth additional limitations similar to limitations set forth in claim 11.

Hoffberg describes the additional limitations as indicated there.

26.   Claim 6 sets forth additional limitations similar to limitations set forth in claim 12.

Hoffberg describes the additional limitations as indicated there.

27.   Claim 7 sets forth additional limitations similar to limitations set forth in claim 13.

Hoffberg describes the additional limitations as indicated there.

28.   Claim 8 sets forth additional limitations similar to limitations set forth in claim 14.

Hoffberg describes the additional limitations as indicated there.

29.   Regarding claim 28, Hoffberg [at Fig. 20] describes an audio recorder-player and

embodiment at column 68, line 29-column 69, line 1, of software in memory running on

processors. Hoffberg describes the content and functionality of the recited limitations

recognizable as a whole to one versed in the art as the following terminology:

a music classification function permitting it to automatically classify music received in

audio signals based on audio features [at column 67, lines 35-64, as intelligent features using the

system to correlate a profile of musical performance received in audio and video broadcast

signals to a known profile of a musical performance];

a watchdog function permitting it to automatically respond to the occurrence of an audio

event [at column 67, lines 35-64, as intelligent features using the system to correlate a profile of

musical performance received in audio and video broadcast signals to a known profile of a

musical performance];

a news review function permitting it to accumulate and play signals corresponding to

news of interest to its user [at column 65, line 53-column 67, line 20, as VCR or other storage

device determining days, time, and duration, recording broadcasts, and playing from storage the

news choices of interest to the user];

the news, signals, broadcast, and information in storage are audio [at column 42, lines 65-

67, as the input in the video input includes the audio];

a time shift function permitting it to record signal programs to be played at a later time [at

column 67, line 65-column 68, line 24, as intermediate storage to record a segment so that an ex

post facto determination of the nature of the broadcast content can be delayed];

the signals, signal programs, and information in storage are audio [at column 42, lines 65-

67, as the input in the video input includes the audio];

an auto pilot function permitting it to automatically operate based on an operational

preference pattern established by the user [at column 65, lines 44-63, as a prediction determining

element of the interface based on a memory profile of past use history of the machine by the user

with derived user preferences base on the user profile].

Lamb

30.   Claims 10, 15, 18, 21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by

Lamb et al. [US Patent 5,437,050].

31.   Regarding claim 10, Lamb [at Fig. 1] describes an audio recorder-player by describing

the content and functionality of the recited limitations recognizable as a whole to one versed in

the art as the following terminology:

N number of sources greater than 1 that transmit N signals generated by M number of

tuners greater than 1 [see Fig. 1, items 40, 35, and their descriptions, especially at column 4,

lines 59-65, of each different broadcast station's audio signal of 4 audio signals that enters via 4

tuners];

an analyzer that extracts R number of signal characteristics from the signals [see Fig. 1,

items 55, and their descriptions, especially at column 5, lines 26-29, of each activity recorder

converting an audio signal into a coded form as activity matrix input];

a memory that stores the signal characteristics [see Fig. 1, items 340, and its descriptions,

especially at column 5, lines 31-32, of the hard disk storage of the activity matrix input];

output circuitry that reproduces a signal corresponding to one of the signals responsive to

selection of at least one of the signal characteristics [see Fig. 1, items 45, 50, 60, 90, 95, and their

descriptions, especially at column 8, lines 54-67, of the discovery device playing back the audio

input queued by the audio extractor for portions of the audio in correspondence to a subset of

activity matrix input];

the sources, signals, signal characteristics, and activity matrix input on hard disk and data

tape audio [at column 4, lines 45-46, as the monitoring systems refers to audio broadcasts].

32.   Claim 21 sets forth a process with limitations associated with using the system recited in

claim 10. Because Lamb describes the similar limitations as indicated there, this claim thus is

anticipated accordingly.

33.   Regarding claim 24, Lamb also describes:

for music in the segment [at column 16, lines 57-68, as music audio items to be

recognized in audio signals];

a selected characteristic corresponds to tempo [at column 21, lines 43-66, as the a activity

matrix contains tempo distribution];

a selected characteristic corresponds to tone and a selected characteristic corresponds to

energy [at column 22, lines 32-47, as the musical key description describes the spectral

distribution].

34.   Claim 15 sets forth limitations similar to limitations set forth in claim 21. Lamb

describes the limitations as indicated there. Lamb also describes additional limitations as

follows:

storing the audio signals [at column 5, lines 18-25, as each of four audio recorders

converts one of the four audio signals into storage of the digital audio input onto the hard disk].

35.   Claim 18 sets forth additional limitations similar to limitations set forth in claim 24.

Lamb describes the additional limitations as indicated there.

Claim Rejections - 35 USC § 103

36.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the
claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various
claims was commonly owned at the time any inventions covered therein were made absent any
evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out
the inventor and invention dates of each claim that was not commonly owned at the time a later
invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)
and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Hoffberg and Harvey

37.   Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffberg

et al. [US Patent 5,774,357] in view of Harvey [US Patent 4,694,490].

38.   Claim 2 includes the limitations of claim 1. Hoffberg describes those limitations as

indicated there. Hoffberg gives audio-video records and broadcasts to a TV receiver and a VCR

receiver as exemplary embodiments. Hoffberg does not describe a radio as a receiver of

broadcasts. In particular, Hoffberg describe the recorder-player is included in a radio.

Like Hoffberg, Harvey [at abstract] describes apparatus and method for automatically

controlling programming transmissions and presentations on television, and Harvey describes:

the audio-player recorder is included in a radio [at column 15, lines 46-51, as a radio

located at a point in the play/recorder units circuitry where it receives the channel to which it is

u\tuned].

As indicated, Harvey shows that including the facility for selectively storing and

reproducing audio signals in a radio was known to artisans at the time of invention. Since

Harvey [at column 15, lines 52-56] also points out that including the facility for selectively

storing and reproducing audio signals in a radio has the advantage of providing sufficient

apparatus to monitor radio channels, it would have been obvious to one of ordinary skill in the

art of broadcast monitoring at the time of invention to include the concepts described by Harvey

at least including the facility for selectively storing and reproducing audio signals in a radio with

Hoffberg's broadcast interface for TV monitoring because it would providing sufficient

apparatus to monitor radio broadcasts and TV broadcasts.

39.   Claim 4 includes the limitations of claim 1. Hoffberg describes those limitations as

indicated there. Although Hoffberg [at column 65, lines 22-36] gives connection to cable

broadcasts as a source of signals, Hoffberg does not describe details of a connection to the cable

broadcasts. Hoffberg does not describe a set-top box, and in particular, Hoffberg does not

explicitly describe including the interface system in a set-top box.

Like Hoffberg, Harvey [at abstract] describes apparatus and method for automatically

controlling programming transmissions and presentations on television, and Harvey describes:

the audio-player recorder is included in a set-top box [at column 16, lines 1-12, as a cable

converter box may provide programming signals to the signal processor].

As indicated, Harvey shows that including the facility for selectively storing and

reproducing audio signals with a set-top box was known to artisans at the time of invention.

Since Harvey [at column 15, lines 52-56] also points out that the facility for selectively storing

and reproducing audio signals includes a set-top box has the advantage of providing sufficient

apparatus to monitor cable channels, it would have been obvious to one of ordinary skill in the

art of broadcast monitoring at the time of invention to include the concepts described by Harvey

and including the facility for selectively storing and reproducing audio signals in a set-top box

with Hoffberg's broadcast interface for TV monitoring because it would providing sufficient

apparatus to monitor cable broadcasts and TV broadcasts.

Hoffberg and Li et al.

40.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffberg et al.

[US Patent 5,774,357] in view of Dongge Li, et al., "Classification of General Audio Data for

Content-based Retrieval," PATREC, Article No. 2700, copyright 2000, pp. 1-12 (Li et al.).

41.   Claim 9 sets forth limitations similar to limitations set forth in claim 1. Hoffberg

describes the limitations as indicated there. Hoffberg also describes additional limitations as

follows:

N audio signal characteristics [at column 66, line 66, as indicia for a weather broadcast, at

column 67, line 57, as profile of a musical performance, at column 43, lines 4-7, as features

including sound, movement, objects, correlated sound and object, background, etc.].

However, Hoffberg does not explicitly describe characteristics including silence, single speaker speech, music, environmental noise, multiple speakers' speech, simultaneous speech and music, and speech and noise.

Like Hoffberg, Li et al. [at page 10, column 1] describes audio characterization suitable for video indexing and analysis and speech recognition]. Li et al. also describes:

characteristics including silence, single speaker speech, music, environmental noise, multiple speakers' speech, simultaneous speech and music, and speech and noise [at abstract, as seven categories of silence, single speaker speech, music, environmental noise, multiple speakers' speech, simultaneous speech and music, and speech and noise to classify audio segments].

As indicated, Li et al. shows that characteristics including silence, single speaker speech, music, environmental noise, multiple speakers' speech, simultaneous speech and music, and speech and noise were known to artisans at the time of invention. Since Li et al. [at page 4, column 2] also points out that general audio data contains segments from many classes has the advantage of avoiding adverse classification performance, it would have been obvious to one of ordinary skill in the art of audio recognition at the time of invention to include the concepts described by Li et al. at least characteristics including silence, single speaker speech, music, environmental noise, multiple speakers' speech, simultaneous speech and music, and speech and noise for Hoffberg's classification of audio data into categories because segments from many classes has the advantage of avoiding adverse classification performance that can result from data only of fewer categories.

Conclusion

42.   The following references here made of record are considered pertinent to applicant's

disclosure:

Takahisa et al. [US Patent 5,812,937] describes broadcast program recognition to transmit digital

data identifiers to digital tuners enable selection of programs by an analog tuner.

Ahmad et al. [US Patent 6,263,507] describes selective acquisition and display of audio, video,

and text by recognition of speaker, silence, music, and words, through a tuner in a

computer.

43.   Any response to this action should be mailed to:

Mail Stop Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

(703) 872-9306, (for informal or draft communications, and please label
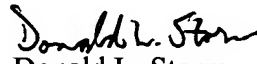"PROPOSED" or "DRAFT")

Patent Correspondence delivered by hand or delivery services, other than the USPS,
should be addressed as follows and brought to U.S. Patent and Trademark Office,
Customer Service Window, **Mail Stop Amendment**, Randolph Building, 401 Dulany
Street, Alexandria, VA 22314

44.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is

(703) 305-3941. The examiner can normally be reached on weekdays between 8:00 AM and

4:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions

relating to an application or questions on the Private PAIR system should be directed to the

Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the

hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For

general information about the PAIR system, see http://pair-direct.uspto.gov.

Donald L. Storm
Patent Examiner
Art Unit 2654

March 19, 2005